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THE DETERMINING OF GENIUS.

AMONG the many critics who have attacked my theory of genius and insanity, only one, Mr. Sergi, has discovered in it a true and capital deficiency. He says in *The Monist* (Vol. 10, No. 1., pp. 85 et seq.), that I succeeded in illustrating the nature of genius, but that I did not explain the existence of its varieties.

He did not mean that geniuses differ essentially in their quality; the nature of genius, whether mathematical or strategic, or literary, is constant and invariable. So calcium carbonate can crystallise either in rhombohedral or hexagonal systems; but its chemical nature is the same in both cases. Explosion, unconsciousness, novelty, intermittence, are common to all forms of genius. But, Mr. Sergi says, their having a common nature does not at all explain why they differ from each other. So the fact that both forms of crystallised calcium carbonate belong to the same chemical substance, does not explain why two forms exist. Water and ice have the same molecular and atomic composition of hydrogen and oxygen, but only a special physical condition of temperature makes them assume the appearance of water or ice.

Now, how can we explain the great variety of geniuses? Why does an artistic genius, an historical, an archæological, exist? This is a new problem, and heredity is not sufficient to solve it.

Sometimes surrounding influences, with predisposition and hereditary transmission, determine the form that genius shall take. So Darwin, St. Hilaire, Raphael, Bach, and the Bernoullis, were born of naturalists, painters, and mathematicians, and lived among

¹ Translated from the Italian MS. of Professor Lombroso by Felice Ferrero.

them, finding in atavistic tendency and surrounding intellectual atmosphere, the first cause of their later work. But this is not a general rule; on the contrary, geniuses, particularly the scientific, show a tendency to—I might say—*dissimilar heredity*, by means of which sons are as different as possible from their parents. Edgar Allan Poe was a descendant of rigid Puritans.

Sometimes the environment alone and at large, particularly economic and social conditions, causes geniuses to follow their definite bent. Many a great jurist has lived in Italy, where crimes and litigations are very frequent, and warlike Piedmont has been the cradle of many a famous warrior. Among the Hebrews, who were and are great merchants, students of economics are numerous: recall, for example, C. Marx, Ricardo, A. Loria, L. Luzzati. The instance of Ricardo is peculiar; he had no inheritance of genius from his father, nor was he inspired by him; he simply shared in his father's business and speculations, and from commercial practice he drew economic applications, which are generally inspired by a very practical spirit, owing to his previous work and his rise subsequent to great commercial events, such as the monetary crisis of 1809.

But all these facts must be considered with much circumspection, because often it has been the very lack of favorable circumstances that has excited manifestations of genius and caused them to spring forth. Without misery and misfortune we should not now have the novels of George Sand and Harriet Beecher Stowe and the comedies of Goldoni. The history of genius is full of circumstances apparently opposed to its development. Boileau, Le Sage, Descartes, Racine, La Fontaine, Goldoni, were obliged to hide their muse beneath the grave garb of the lawyer and the theologian. Poisson's parents wanted him to become a surgeon; Herschel's and Cellini's meant to make players out of them. Michaelangelo's father wanted his boy to become an archæologist; never—he used to say—an image-scribbler. When a great sculptor saw the lad's first attempt and begged to have him placed in his own studio, Michaelangelo's father exacted of the sculptor a yearly sum for this privilege.

Flaubert was in his childhood intended for a lawyer.

Galileo had among his ancestors, up to 1538, several philosophers, magistrates, and great thinkers (cf. V. Nelli's *Life of Galileo*, 1793). Even his father, Vincent, was an original musician and a student of geometry; his brother Benedict was also a praiseworthy musician. But evidently his heredity had no direct influence on Galileo; nor had his education, because education in those times inclined strongly to rhetoric and classicism,—Nelli affirms that there was then only one school of mathematics and geometry in Tuscany, nor could his medical studies have been of any use to him, because medicine was quite theoretic and without the foundation of experiment.

It appears, then, from the above instances, that hereditary and surrounding conditions, once the causes most commonly assigned, either fail to explain the origin of genius-variation, or are contradictory or insufficient. Nor, to determine the special temper of a genius, is it enough to know the domination of acoustic or visual centers, the vivacity of fancy, the rapidity of synthesis that we discover so easily in his handwriting and style, although such conditions of intelligence have an enormous influence on genius. But a visual genius may become a poet, sculptor, painter, histologist, or calculator; and an acoustic genius may be a musician, or an orator, a poet, or critic, or novelist. This domination is not sufficient to settle the variety of genius. So I believe that there is another factor of utmost importance to which belongs the principal part in this determination, and with which heredity, environment and the peculiar nature of genius are co-operators: that is, according to my opinion—a strong impression received at puberty.

GENIUS AT PUBERTY.

He who analyses biographies of great men will find that in most cases the determining cause of creative direction lies in the combination of individual tendencies, with a very strong sensorial impression made at a time not far from puberty.

While a mere lad, Segantini's genius for painting had already

flashed upon the walls of the Reformatory where he was kept, and where his superiors wanted to make of him, willy-nilly, a shoemaker. Had they encouraged and rewarded him, he would, possibly, have been an able shoemaker, of whom nobody but his customers would have known; but they abused him; then he fled from his wicked protectors to his native mountains, where he became a shepherd. There he used to draw sheep and huts without any particular thought of it. Once—he was twelve years old then—he saw a little girl die, and her mother disfigure herself painfully, because she could not preserve her daughter's image. He was inspired, and made a picture of the child: from that day he was the great Segantini. The combination of strong moral and physical impressions, at the very beginning of puberty, with such a powerful visual talent, made him a genius as a painter.

Proudhon was the son of a wood-cutter; the curé of his parish had taught him a little Latin, and the Benedictine friars of Cluny the elements of drawing. At the age of fourteen, he was trying to copy some bad pictures in that convent, with colors made out of plant juices and brushes of mule hair, when a friar told him that he would never succeed with his strange methods, because those pictures were oil-painted. Such a remark was sufficient to make him find out the secrets of oil-painting by himself, as Pascal did those of geometry. (Gauthiers, 1136.)

Stuart Mill, at the age of twelve, was so deeply affected by studying his father's *History of India*, that his genius and passion for historical and economic events began at that time.

Arago, a lawyer's son, was precocious in music, and took an interest, while a youth, in classical studies. His passion for mathematics burst forth suddenly when an artillery officer told him that he had rapidly reached his position by graduating from the Polytechnic School and studying exact sciences. Then Arago quitted Corneille for mathematics; he studied them by himself, and at the age of sixteen was ready to take the examination for the Polytechnic.

Thomas Young was so precocious that at the age of two he could read, and at five he had learned a large number of English

and Latin poets, whose works he could recite by heart. When eight years old, he once met a land-surveyor, who showed him his instruments to calculate distances and the elevation of far-away bodies; he immediately set himself to study a dictionary of mathematics, to understand the structure of those instruments. He made a microscope by himself, and learned differential calculus in order to comprehend mechanics. (*Arago—Œuvres complètes*, 1854, Volume II.)

Galileo, up to his seventeenth year, made no physical discovery of any consequence; he felt himself inclined to exact sciences and detested the inexactness of metaphysics and medicine. But when at eighteen, in his third year of medical training, he saw in the Cathedral at Pisa a lamp regularly oscillating, he thought suddenly that he could invent an instrument for the purpose of studying the laws of isochronism, and examine the state of the pulse.

Liroy, in Martini's *Primo Passo*, says that he was eight years old, when, at the birth of a little brother, he was shut up in the library to keep him quiet, so that he should not disturb his mother, and a volume of Buffon was given him to read. It was the spark for his genius. "It seems to me as if I saw those birds yet; I dreamed of them all the night long; my place as a coming naturalist was settled."

Darwin, at eight, while he had already a great passion for collecting plants and animals, fancied, or rather, invented, and told to a school-mate, the story that he could change the hue of flowers by sprinkling plants with colored solutions. It was a mere story, but it shows that from those early years he had observed the variability of plants. The germ of that idea, which was to dominate his whole life, was concealed in this puerile fiction that afterwards became a reality. The great English naturalist believes that his having seen at that time a copy of a journey around the world, which greatly interested him, caused him to long for trips to far countries, and to travel, in later days, on the *Beagle*. On the contrary—he says—school, as a means of education, was simply a cipher to him. (*Vie et correspondance de Ch. Darwin*, 1888, p. 32.)

Poisson (*Arago—Œuvres*, V. III.) was to be, according to his

parents' wish, a phlebotomist; his education was entrusted to an uncle of his who pretended to instruct him by making him puncture the veins of cabbage leaves with his lancet; he was always making mistakes. But at eight or nine, he once saw a programme of the Polytechnical School and noticed that he could readily solve some of its problems: his career was discovered and his future settled.

La Fontaine was the son of an official, a poor verse scribbler. His genius was revealed when his attention was attracted to Malherbe's beautiful poem on Henry IV.'s death. Then he knew that he could be a poet, and such he was.

Gianni (*Universal Biography*) became a poet when first he read Ariosto. Then he made *extempore* verses, before he had learned the art of composition, shortly after puberty.

Lagrange had no great aptitude for study; his mathematical genius appeared when, as a high school student, he read one of Halle's writings; he wrote then his first essay on the calculus of variations.

Benjamin Franklin was the son of a mechanic. At eleven, he had to leave school, and, to earn his living, entered a soap factory, and later a printing-house where he could learn something. Having noticed for the first time the discharge of an electric spark in a toy machine, he imagined that lightning had the same origin, and discovered the theory of lightning and the lightning-conductor.

In all these cases, sensation did not rouse genius, but was the occasion of its revelation, and determined an individual who was organically predisposed, to turn to an end from which circumstances, education, etc., tended to take him and to separate him permanently.

So Darwin was predisposed by atavism to great naturalistic synthesis, because several of his ancestors had already worked in that direction, and his wit gave precocious proof of such predisposition in his idea of getting artificially colored plants. But, according to his own declaration, all the education he received was of no help to his later studies. The voyage of the Beagle was the point of departure for all his creations, and the intense wish for that

came to him from reading, at puberty, a book on a trip around the world (*Correspondence*, 1878).

Sir William Herschel was a player who had learned by himself languages and mathematics, without any special end in view. His having seen, at twenty-one, the field of the sky through a telescope, struck him so forcibly that he made a telescope himself, and was driven to study which metal alloy was the best reflector of light. The result was, that by the age of thirty-six he had achieved the construction of a great new telescope.

Lalande, a pupil of the Jesuits, composed dramas and novels at the age of ten; later, he aimed to be an eloquent lawyer: but when an astronomer made him observe the great eclipse of 1748, he felt his passion for astronomy, and became an astronomer, too; he was sixteen years old at that time.

Boerhave was intended to be a clergyman, and he took his degree of divinity. The idea of curing an ulcer that vexed his hand, roused in him his first passion for medicine.

Lalande, Lagrange, Young, thought of themselves as classical, literary men, until either astronomical instruments or demonstrations in geometry came accidentally into their hands; and Gianni, a stays-maker, became a poet after reading Ariosto's poems.

In some cases, however, the tremendous effect produced by the first impression, as in Guerrazzi, shows that a true transformation happened, owing to a sensorial impression at puberty; should such a sensation have been wanting, genius would never have developed. Guerrazzi writes:

"I must note an event which may be considered an epoch of my brain. My lot at that time, when I was twelve years old, brought Ariosto into my hands. My mind, made like the strings of a harp, to be moved by vibrations of beauty, and constrained, thus far, into the hateful coils of grammar and of convent-life, plunged into the joys of Ariosto's poems. Every man wishes for the paradise of his own fancy; to me the spirit of those times was a paradise and Ludovico was master. I used to dine with my *Orlando Furioso* by the bread; to sup, in the same way; and father had to put out all the lights in order to get me to bed. I don't know what my value is; my descendants will see that; but if I am worth something, I owe it to Ariosto." (*Autobiog.*, 1900.)

Here we can see the clear expression of the dynamogenous, fermentative capacity of a certain impression on a man of genius, during his pubescence, even in spite of his education's having pushed him in a direction contrary to his own innate tendencies. A last instance is offered by Galileo, whom his education drew in the way of classical, or musical, or medical studies, as we stated above; he felt inspired to mathematics and astronomy at the sight of a pendulum. This is a most characteristic example, because new applications of the pendulum kept occurring to his mind all through his life, to the very end. At first, when he was a medical student, in 1583, he applied it to pulse-measurements; then, when he interested himself in astronomy, to star and time-measurements—as one may read in a letter of his; and finally, in 1641, at Reagli, blind and near death, he thought that the idea could be applied to clocks—as is proved by a letter of Viviani—and only his blindness, which caused his drawings to be formless, and his death, prevented him from completing the work he had started at seventeen at the sight of the swinging lamp in the cathedral of Pisa. (Nelli's *Life of Galileo*.)

To many a genius the first impulse has been given by feminine beauty. Petrarch, at the age of fourteen, was drawn to poetry and a life of genius by the first sight of Laura. He wrote afterwards, April 6, 1327: "I don't deny that the little I am worth I owe to that woman, and that if I enjoy some fame or glory, it would never have been, had she not cultivated with so noble affections the little seed of virtue nature placed in my soul."

Nencioni tells us that his first poems, at twenty, were inspired by the sight of a very beautiful maid. De Amicis lately stated that one of the most brilliant writers of vernacular poems in Piedmont had not yet written a line at twenty-two, when he fell deeply in love with a lady of prominent position; some time afterward he met her in a railroad car, and in a moment when all the lights were accidentally extinguished, he felt her hand gently pressing his and knew that his passion was accepted and returned. A few hours later, he wrote the best of his poems, "A Shepherd's Dream," and was always, thereafter, a very able poet.

Dante declares in his writings that he was inspired by his meeting with Beatrice in his early youth.

Burns, a shepherd, who was already inspired by his mother's popular songs, wrote his first poem at fifteen, for love of a young girl.

Sometimes religious passion takes the place of erotic excitement. Lacordaire was roused by his first communion, and Rapisardi relates that, at thirteen, an ode to St. Agatha started the long series of his poems.

The great essential in these instances is that they all belong to childhood or pubescence. Now, men are undergoing external influences and strong sensations at any time, but without such a reaction as they show at puberty. Puberty has a tremendous importance for one's mental development, on account of its greatest impressionability to external causes. Youth is then in a condition of latent explosibility, ready to burst out under the pressure of every influence, whether of scientific theories, or of artistic enthusiasm, or of misfortune, or of strife. Adult man is thrown into the midst of new surroundings, new habits, new individuals, but they do not find such a quick echo in his soul, because his way is settled, he has sentiments and ideas of his own and may hardly be influenced.

A very important proof of this truth appears in Starbuck's *Psychology of Religion*. The author personally investigated the cause of conversion of many hundred students in seminaries and upper schools of America, with the following results :

	WOMEN	MEN
By parents.....	23 cases	32 cases
By familiar surroundings.....	30 "	52 "
By friends and acquaintances.....	34 "	42 "
By ministers.....	23 "	20 "
By teachers.....	0 "	6 "
By writers.....	17 "	17 "
By science.....	3 "	8 "
By art, music, poetry.....	8 "	15 "
By books.....	10 "	12 "
By deaths.....	0 "	13 "
By misfortunes.....	0 "	2 "
By internal struggles.....	0 "	0 "

He noticed that besides a more general influence on the part of parents, a very large proportion of influence was exercised by friends or teachers at particular times of life; or tales, sermons, poems, songs, listened to, or read, under particular circumstances,—these factors contributing to conversion as frequently as familiar surroundings. But in all these cases, this is the fact of actual interest to us, that any external influence, through friends, books, teachers, etc., acted, as the case is with genius, at puberty, during a period extended by Mr. Starbuck to six years, by including years immediately preceding and following puberty, the psychical and physical influence of which was found by him to last much longer, especially in the case of men. Indeed, it is evident from a graphic representation of his observations that the line representing the number of men's conversions in relation to their ages has three *maximums*, one at sixteen years, another at twelve, and a smaller one at nine. This curve is exactly parallel with Harnack's, for mental tests, in order to fix a maximum of intelligence, or, better, of reasoning power, in boys of the same country.

Mr. Starbuck gives also in his book many answers he got to his questions, and such answers show that influences were—as stated above for genius—momentary, enormous, as revelations quite out of proportion to events, having nothing peculiar in themselves. Some young men were converted after listening to the serious preaching of a friend or teacher they had known and loved and listened to, even before; or after reading a book, a story, a quotation, they had seen hundreds of times; hearing music, or witnessing a pitiful sight that had nothing worth notice in itself, but which agreed at the time with their particular condition of soul.

The same sort of thing occurs in the unseen, inner life, according to Mr. Starbuck's statement. Most of the men interviewed by him had noticed at some moment of their childhood a sudden revolution which determined a violent change in their characters, ideas and aims,—a transitory period of folly, he calls it. For many of them such a revolution was the cause of terrible melancholy; for others, of ferocious scepticism, or stupid passions.

Mr. Marro pointed out something like this in Turin schoolboys who become riotous, undisciplined, and bad at about twelve or thirteen years. (Marro's *La Pubertà*, second ed., 1900. Anthropol. Series, Vol. XXVI., Bocca Bros., Turin, Italy.) The result of an investigation of mine, attempted among forty educated young men, is that, at that time, impulsive, pyromaniac, kleptomaniac, and strikingly ambitious tendencies are very strong and diffused, sometimes even with slight hallucinations, and almost always with megalomaniac tendencies and demency alternated. Out of forty examined, sixteen declared that they noticed nothing or recalled nothing; seven remembered having, between eight and twelve years of age, a strange megalomania, in opposition to their family circumstances, to become conquerors of Verne's Islands or the Republic of San Marino; five stole at home in order to waste money,—they were workmen's sons and tried to make people believe that they were rich and powerful; five had persecuting ideas of being arrested by the police, or of becoming soldiers, when they were eight years old; three were insulting, quarrelsome, and villainous; two were seized by religious mania to become missionaries or hermits; two had obscene impulses, and one a suicidal tendency. A rich, very honest, young man, during pubescence, stole even coin pieces from shops, though he was not in need, and threw them away, or concealed them underneath stones, as soon as he had taken them. Another rich man had stolen a pair of shoes from a show-window, only to throw them away.

A lady-teacher in a Turin boarding-school told me that she had to look after three sisters, who successively attended her school; and that all of them were good and quiet up to twelve years, became intolerable liars, bad and insubordinate, from twelve to fifteen, and later resumed their previous character.

The fact is, that at that time a tremendous overflow of life is prepared and organised and perturbs the being, enveloping it as in a sort of coil, which can—at least temporarily—drag the feeble to their ruin, but exalt the strong to giddy heights; because at this age of complete reconstruction and transformation of the organism, the psychical centers are the most affected. This proves the truth

of a great writer's sentence, that he who never created anything in his youth, will never create anything later. Now, in this giddy movement it is natural that any most energetic, though formerly latent, activity, breaks its way, particularly when the electric shock of a special sensation has first thrust it in that direction toward which it naturally tended. So a fertile coupling happens that definitely polarises young people and causes a new organism of greater proportions to develop.

What happens transitorily in normal people would happen on a larger scale in geniuses; such an organic revolution is more pronounced and more manifest in the latter, as well as in criminals and the insane. The insane indeed show, above all in their psychopathies, a keen resemblance, almost an identity in the process of the formation of mad intellect, with that of genius ideas in men of genius.

Sometimes, although psychical activity is normal to a great extent, an impression received by an individual during, or shortly before, puberty, assumes such a great importance in him, as to determine all his actions, all his psycho-sexual content. Such is the case of those so-called *erotic fetichisms*, of people who can be sexually attracted only by seeing an old woman with a coif, or by holding a candle in the hand, or by being insulted, etc., that can be explained by means neither of atavism nor of neurosis. When those people are questioned, however, one learns that in the very moment of their first erotic excitement they were so powerfully struck by the image of an old woman with a coif, or with a candle, that they could be roused in no other way. A man who felt an erotic fetichism for women dressed as Italian models, recalled, in explanation of the fact, that he saw, while sixteen years old, in the first power of his puberty, a model of extraordinary beauty so dressed.

This is a phenomenon which is also common to genius, certainly owing to its degenerative character, by which the process of erotism remains crystallised in one of its first periods of sensorial excitement. Any one normal in his erotic passions is first excited by the sight of some feminine belongings; but in those abnormal

cases this moment absorbs the whole erotic process: so that the lover of a model's dress, above spoken of, no longer needs to see her face, or wants her to speak to him, to touch him, the first moment of excitement so wholly substituting itself for all the successive ones that the latter may be suppressed.

Even in many cases of hereditary paranoia a like phenomenon is observed, which explains some strange deeds normal and pathological psychology are quite unable to interpret. Individuals who received a strong impression in a particular circumstance were affected all through life by it, exclusive of others, although their *psyche* was altogether unchanged. Mr. Marro speaks of a girl who, upon hearing a man talk a long time on some parts of the body, felt a deep horror, became a maniac, and continually fancied men speaking of that matter. A girl was so impressed by a volcanic eruption that thereafter she believed herself to be always in the midst of volcanoes, and another was so frightened by a quarrel in a *bal-masqué* that always afterward she saw people with masked faces. De Quincey is the most typical case; having seen, when he was six years old, his dead sister lying on her death-bed, he was so struck by the sight that the sky and the clouds always seemed to him full of beds with dead girls in them; these visions lasted for the greater part of his life, so that he said himself that all our ideas exist as germs in the child, and chance—an accident, futile in itself, but decisive—causes them to develop.

THE FACTOR OF AGE.

Sometimes one notices that the influence on the creation of genius, as well as the determination of folly or religious conversion, did not concur with the time of puberty, but happened even long before as in De Quincey. That is clear, when it is understood that what we said must be applied to a longer period than that of puberty itself, and extended to years immediately following and preceding it. Some geniuses are so strangely precocious that infancy and youth are confused in them. Mozart was a composer at five; Gassendi, a preacher at four; Picodella Mirandola knew several

languages at ten, and Kotzebue wrote his first comedy at three. This precocity is often shown by Negroes and Esquimaux, and is evidently a degenerative characteristic, as criminals present it (31-45 per cent. of the cases); female offenders have their menstruation even two years earlier than the average.

SLOW IMPRESSIONS.

Sometimes, on the contrary, the fertilising impressions of genius are received, apparently, much later than at puberty. This is explained by the fact that circumstances prevented fertile contact from taking place, or such contact found a quite unprepared individual and was therefore unfruitful. Starbuck noticed some instances of slow conversions after thirty, but these cases happened when extreme poverty or extraordinary "family circumstances," obliged the individual to busy himself with the most pressing questions of life, and to compress every aspiration for great ideals.

So Caxton, born of very poor parents, growing up in the want of any education when a boy, was employed by a merchant who later became Lord Mayor of London. He acquired thereby great confidence, and was sent to Holland as a representative of the Merchant's Association; there he had occasion to hear about Gutenberg's invention and that was enough to make him an inventor in this line.

In some of these instances the influence of puberty was a most important one, but stayed latent; it did not at once determine, but prepared for the bursting out of a genius's vocation, which happened only later, under other circumstances. Thus, Lacordaire received so deep an impression from his first confession at seven, that he preached on it in a touching way in a private chapel to his relatives, and recalled that time, many years later, as the germ of his career. When he was twelve years old his religious fervor was reborn in his first communion, which—he says—was the utmost joy of his life; after that he studied, became a lawyer, and had great success, when at twenty he was suddenly overtaken by religious enthusiasm which caused him to make a priest of himself. Evi-

dently, although he came to a decision only when an adult, his greatest incitement came to him in his earliest puberty.

Berlioz had already composed a *pastorale* at twelve; then he had his head stuffed by his father with classics and medicine. At fourteen he felt again his love for music, because of some operatic musical sheets which occasionally came into his hands; but although a musical fermentation was working in his brain, he kept on studying medicine and anatomy. Only at seventeen, when he listened to a performance of *Le Danaïdi*, did he begin to hate everything that was not music, and lost his sleep over it; then he resolved to leave his medical studies and became the great composer. Unconscious influences acted, in such a case, before and at puberty, worked concealed for years, and burst out under a fortuitous circumstance, long afterward.

Therefore, while society cannot be held absolutely responsible for births of genius, because too many independent factors are required for its formation, it must be held responsible in so far as it has a great influence in causing genius to take a direction and follow a line, because almost all of the deep impressions which strike a boy in his puberty are excited by the environment which surrounds him. That is why great geniuses of Italy were for a long time bound to classicism and painting; as in the Hebrew race they were bound to mathematics, philosophy, and political economy: in Piedmont, particularly to war; in Germany, to commerce and industry; and in America, to inventions and practical applications. If business or military glory, or something else, be a constant and general tendency of a people's spirit, the impression thereof which strikes a boy of genius, will cause him to be an Edison rather than a Galileo; a Ferrari or Titian rather than a Stanley.

That is why I am opposed to the Italian classical education that presents to the minds of the new generations useless or dangerous examples, instead of practical instances, whereof the imitation could place Italy on the same footing with other nations. That is why I endorse and heartily support technical, scientific, professional, and, above all, industrial education. Such an education would give any born genius or talent the same opportunities and

chances to work at building up national wealth and strength, as it does in America and Germany, where the genius of industry and commerce is in its full bloom, although the genius of science and art may be declining.

CESARE LOMBROSO.

TURIN, ITALY.